



**GAS SETTLEMENT
BUSINESS CASE
2006-2010**

Executive Summary

The Gas Settlement Project will provide DERS with the information technology and business processes to interface with the retail settlement systems proposed by ATCO Gas. ATCO Gas is currently obtaining stakeholder feedback on its account and load balancing systems, the costs of which are subject to EUB approval.

This business case describes the Gas Settlement Project and the costs associated therewith, including incremental cash flow analysis and revenue requirement impact. The capital cost of the Gas Settlement Project in respect of regulated service is forecast to be \$2.7 million in 2006 with annual operating costs of \$0.3 million. As this project relates to gas only, all costs will be assigned directly to the DRT. Incremental DRT 2006 revenue requirement is forecast to be \$0.7 million.

The benefits of the Gas Settlement Project include increased accuracy of DERS' cost/revenue controls and a reduction in customer billing errors associated with variances between meter reads and billing, enrolment/de-enrolment errors, and energization/de-energization errors. DERS considers such benefits, which will flow from DERS' customer care costs to ATCO I-Tek, to be non-quantifiable until the ATCO Gas settlement systems have been established.

With no viable alternatives to the project, DERS recommends proceeding with the Gas Settlement Project, as set out in this business case.

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1 Introduction

1.1 Business Case Subject

This business case evaluates the projected costs of DERS' proposed Gas Settlement Project. DERS is proposing the Gas Settlement Project to accord with certain retail gas settlement initiatives (Retailer Service) planned by ATCO Gas (AG). DERS, as a Default Supply Provider, must have the appropriate information systems in place to participate in the Alberta gas market, including retail gas settlement. The Gas Settlement Project will provide DERS with the technical capability to do so.

The project capital costs are allocated between regulated and competitive business lines consistent with other such allocations, namely 90% regulated and 10% competitive. Unless otherwise noted, all references to the Gas Settlement Project costs and benefits in this business case relate only to that portion allocated to DERS. DERS has included the 90% allocation of the Gas Settlement Project costs in its 2005-2006 forecast DRT revenue requirement.

1.2 Background

In 2002, DEML entered into an agreement with the ATCO Group (ATCO) to transfer ATCO's natural gas and electricity retail functions to DEML. Subject to certain conditions, the EUB approved the transfer in Decision 2003-098, including the appointment of DERS to perform the Default Supply Provider and Regulated Rate Tariff functions on behalf of ATCO. Consequently, DERS provides natural gas to approximately 850,000 households and electricity to 165,000 households in Alberta, along with certain regulated customer care services.

On July 25, 2003, AG filed its Retailer Service and Gas Utilities Compliance Application No. 1308709 with the EUB which subsequently rendered Decision 2003-102 on Phase I of ATCO's application. Phase II of AG's application (Application No. 1380942) has been segregated into two parts. Part A is intended to establish Retailer Service account balancing and load balancing principles, while Part B will set out the details of Retailer Service in accordance with those principles, including development of the Natural Gas Settlement System Code. DERS is actively participating in the AG proceeding and considers that industry wide collaboration is necessary to successfully resolve the related issues. Documents relevant to AG's Application No. 1380942 are available on the EUB website.

The Gas Settlement Project will incorporate the functionality necessary for DERS to work within retail gas settlement, and in particular, the Natural Gas Settlement System Code which is a key outcome of Application No. 1380942, Part B.

1.3 Technical/Business Drivers

DERS has developed the Gas Settlement Project in direct response to AG's proposed account and load balancing information systems and processes. Retail settlement is a key business process which matches supply to actual demand and verifies that all energy and associated charges are accounted for and billed correctly. Retail gas settlement will address inaccuracy of data including, but not limited to:

- Differences in gas wholesale invoices and gas nominated to pipe;
- Differences in meter reads and retail customer billings;
- Differences in transportation services invoiced and allocated to customers;
- Enrolment/de-enrolment errors; and
- Energization/de-energization errors.

DERS currently provides load balancing for AG and ATCO Pipelines through the regulated Deferred Gas Account (DGA). As part of AG's Retailer Service and Gas Utilities Compliance application, load balancing will be removed from the DGA as AG and ATCO Pipelines will load balance their own systems. This will comply with the distributors' load balancing requirements under the *Gas Utilities Act Roles, Relationships and Responsibilities Regulation*. DERS will be subject to new account balancing rules which include a daily imbalance tolerance of +/- 5%. The functionality provided through the Gas Settlement Project will allow DERS to manage these imbalances.

Further details on Retailer Service can be found in the AG technical meeting presentations located at <https://www2.eub.gov.ab.ca/dds.iar/DDS-IAR-ViewAppDocuments.asp?doctype=attachments&ApplicationNumber=1380942>.

1.4 Benefits Rationale

Experience in the Alberta electricity industry has demonstrated the link between load settlement inaccuracies and customer billing errors, leading to increased billing and collection costs and significant customer concerns. Retail gas settlement, along with the associated information systems and processes, is intended to structure information flow to ensure accuracy of billings, both to retailers and end-users. Completion of the Gas Settlement Project will permit DERS to:

1. Validate meter data received from AG;
2. Validate enrolment and energize data from AG;
3. Balance delivery charges invoiced by ATCO Pipelines to the delivery charges invoiced to customers;
4. Balance delivered volumes invoiced by ATCO Pipelines to site level meter data;
5. Balance wholesale gas purchase volumes to settlement site level nominations received from AG;

6. Reconcile energy volumes purchased to energy volumes billed to customers;
7. Validate site level imbalances volumes provided by AG; and
8. Identify, track, and resolve errors and exceptions.

Given that the gas settlement structure has not yet been established, DERS cannot quantify the benefits arising from the Gas Settlement Project. DERS' customer care costs are reconciled by way of a deferral account and will include any reductions arising from improved accuracy of customer bills.

2 Project Description

The Gas Settlement Project includes the development of software and processes that will align with the AG settlement system. At project completion, DERS will be able to perform the following settlement functions (grouped into five main areas): Data Load, Data Validation, Enrollment, Imbalance and Site Allocation.

1. Data Load – DERS will receive and load the following data:
 - Meter read transaction on a daily basis
 - Enrollments and de-enrollment transactions on a daily basis
 - Energizations and de-energize transactions on a daily basis
 - Monthly delivery charges
 - Monthly site-level nominations (via spreadsheets)
 - Monthly site-level imbalance calculations (via spreadsheets)
 - Monthly site-level unbilled estimates (via spreadsheets)
 - Wholesale gas purchase invoices
 - Daily pipeline statement volumes
 - Site Extract
 - Customer Bill Reconciliation

2. Data Validation – DERS will validate Meter Read transactions received from ATCO Gas (North & South).
3. Enrolment Functions – DERS will compare on an ongoing daily basis the sites and their states from:
 - The Site Extract
 - Enrollments/de-enrollment and energization/de-energization transactions
 - Monthly site-level Nominations
4. Imbalance Functions – DERS will balance nominations, purchases and imbalances for a given month, including:
 - Wholesale Reconciliation; balance wholesale gas volumes purchased with wholesale gas volumes received.
 - Retail Imbalance Validation; calculate monthly imbalance and compare to imbalance provided by AG.
 - Wholesale Imbalance Validation; balance monthly wholesale gas received by ATCO Pipeline with sum of the daily site level nominations for the month, taking into account prior month's imbalance.
5. Site Allocation Functions - ensure that the volumes of gas allocated to sites through the purchase of gas, meter reads, and customer bills balance for a given period.

2.1 Project Cost Description

The total capital cost of the Gas Settlement Project are forecast at \$3.0, with ongoing operating costs of \$0.5 million (plus annual inflation). 90% of those costs are allocated to DERS' DRT in 2006, with 10% allocated to the competitive business. Costs allocated to the DRT in 2006 are detailed below and include the cost of an external vendor, which DERS intends to select through a competitive bidding process.

Gas Settlement Project Cost Description - DRT Allocation

Cost Description	2006 Forecast Cost (\$000)
Capital Costs	
Project Design, Planning	\$180.0
Hardware Unix/Oracle Application Servers	\$540.0
Hardware/Software Configuration (back-up, set-up, optimization)	\$180.0
Software Licensing	\$225.0
Disk Capacity	\$540.0
Project Labour (external consultants, project management and control)	\$450.0
Development and Testing	\$585.0
Total Capital Costs	\$2,700.0
Operating Costs	
3 FTEs (system operation, database management); assumes 6 months in 2006	\$168.8
Annual Maintenance and Support; assumes 6 months in 2006	\$91.8
Total Operating Costs	\$260.6
Total 2006 Forecast Cost	\$2960.6

2.2 Alternatives to the Gas Settlement Project

DERS is recommending the Gas Settlement Project after giving consideration to several alternatives. The two most likely alternatives are described below. In comparing alternatives, DERS balanced costs, benefits, and concerns and concluded that the Gas Settlement Project provided the best overall solution. The Gas Settlement Project benefits and concerns, as compared to the alternatives, include:

Benefits

- Manual reconciliation reduced
- Potential to use electricity model to develop underlying structure
- Increased control over the revenue assurance function
- Minimize use of scarce DERS resources
- Long-term solution

Concerns

- Reduced ability to customize solution
- Require some internal process change to align with vendor processes
- Possible difficulty in interface with existing systems
- Reliance on external vendor

Alternative 1 - Basic Reconciliation

Basic Reconciliation would rely on the internal development of an application and/or business processes to perform analysis and reconciliation of information received from AG and ATCO I-Tek. The analysis and reconciliation would be performed to identify and deal with exceptions outside a prescribed tolerance. Due to the significant ongoing operating costs, DERS considers this option to be non-viable.

Estimated Cost

- \$0 capital, \$3.1 million operating

Benefits

- Simplest solution
- Avoids or delays large capital investment in a system
- Enable DERS to develop knowledge and expertise in aiding in the development of a settlement system in the long-term
- Allows for time to focus on long-term solution

Concerns

- Incomplete control over revenue assurance
- May require additional resource to perform reconciliation
- Availability of required internal technical resources
- Time and data volume to reconcile may exceed time frame to recover costs

Alternative 2 - Developing Internal Systems to Perform Reconciliations

This alternative would require modification of existing systems to aid in the reconciliation process. DERS would undertake the related development, testing, implementation, operating and maintenance of the solution. Lack of internal resources leads DERS to characterize this alternative as non-viable.

Estimated Cost

- \$2-3 capital, \$0.5 million operating

Benefits

- Potential ability to perform more in-depth analysis and reconciliation on information
- Control over the development and operations of the solution

- Solution can be developed to match existing business processes

Concerns

- Capital investment for potentially only a short term solution
- Application development is not a core business
- Developing a system solution when there is no standardized transactions, an undefined market structure and no industry input
- Availability of internal resources.

3 Financial Metrics

3.1 Analysis Period

This business case covers the full five year period from 2006-2010 in respect of cash flow analysis and 2005-2006 in respect of revenue requirement impact.

3.2 Revenue Requirement

In its 2005-2006 DRT and RRT Application, DERS is proposing to treat the forecast 2006 incremental revenue requirement arising from the Gas Settlement Project by way of a deferral account. The cost, timing, and benefits of the Gas Settlement Project are conditional upon the retail gas settlement solution established through Application No. 1380942. Although DERS' influence in respect of retail gas settlement is limited to stakeholder participation, DERS will design and complete the Gas Settlement Project in a cost-effective manner.

The Gas Settlement Project will result in the overall revenue requirement increase shown in the table below. The calculation of incremental revenue requirement accords with those methods used in DERS' 2005-2006 DRT and RRT Application and is segregated into return on working capital, depreciation, and operating expense assigned to the DRT.

Gas Settlement Project Incremental 2005 -2006 Revenue Requirement

Incremental Revenue Requirement	DRT	
	2005 (\$000)	2006 (\$000)
Working Capital Carrying Costs	0.0	152.5
Amortization	0.0	270.0
Operating Expense	0.0	260.6
Total Incremental Revenue Requirement	0.0	683.1

3.3 Cash Flow

This analysis includes incremental cash flow estimates in C\$000 for each year of the analysis period. The discount rate for net present value calculations is assumed to 10.19% in each year of the 2006-2010 analysis period. The discount rate represents DERS' proposed return on working capital rate for the DRT.

Gas Settlement Project Cash Flow and Net Present Value

Incremental Cash Flow (\$000)						
	2006	2007	2008	2009	2010	Total
Cash Flow / Costs & Expenses						
Capital Expenditures	(2,700.0)	0.0	0.0	0.0	0.0	(2,700.0)
Operating Expense	(260.6)	(531.5)	(542.2)	(553.0)	(564.1)	(2,451.3)
Total cash outflows	(2,960.6)	(531.5)	(542.2)	(553.0)	(564.1)	(5,151.3)
Net Present Value						
Discounted Cash Flow Stream	(2,686.8)	(437.8)	(405.2)	(375.1)	(347.2)	(4,252.1)

3.4 Sensitivity Analysis

A 10% increase or reduction in the estimated Gas Settlement Project cost would have an equivalent effect on 2005/2006 revenue requirement and net present value. The timing of the Gas Settlement Project is dependent upon the AG application; if the project is delayed, DERS amortization will be reduced by \$45,000 for each month of delay. If the project were delayed one month, working capital carrying costs would decrease by approximately \$21,000.

4 Conclusions and Recommendations

Based on the information provided herein, DERS recommends proceeding with the Gas Settlement Project, by way of a deferral account. The Gas Settlement Project will permit DERS to participate in the AG proposed retail gas settlement systems and provide an on-going benefit to consumers.